Amendments to the Specification:

Please replace the paragraph beginning on line 19, page 20 with the following amended paragraph:

Fig. 5 is a ~~photograph~~ schematic diagram illustrating a top plane view of an exemplary SPR imaging device based on the Kretschmann SPR configuration.

Please replace the paragraph beginning on line 9, page 32 with the following amended paragraph:

To achieve the aforementioned goals, detection sensitivities and dynamic ranges of an exemplary SPR sensor were computationally modeled and evaluated by monitoring the refractive indices of low concentration sucrose solutions. The exemplary SPR sensor **500** employed in these studies is based on the Kretschmann configuration and is shown in Figure 5. The polychromatic light source is a 150 W quartz halogen lamp **510** (Dolan-Jenner, Lawrence, MA) coupled to a multi-fiber light pipe **515** (Edmund Industrial Optics, Barrington, NJ). Light from the source passes through iris **520** and is collected by an achromatic lens **525** (Edmund Industrial Optics, Barrington, NJ) and focused at a pinhole **530** (100 μm in diameter, Edmund Industrial Optics, Barrington, NJ). A second achromatic lens **535** (Edmund Industrial Optics, Barrington, NJ) collects light from the pinhole **525** and forms a collimated beam. This expanded and collimated beam passes through a polarizer **540** (Edmund Industrial Optics, Barrington, NJ). The polarizer is mounted onto a motorized rotation stage **545** (Newport Corporation, Irvine, CA) so p-polarized and s-polarized images can be acquired conveniently. The light then passes through an interference filter **550** (Edmund Industrial Optics, Barrington, NJ) that selects a narrow band (10 nm FWHM) of operating wavelengths in the near infrared to optimally contrast the range of refractive indexes in the sample. The filter is mounted onto a motorized

rotation stage **555** (Newport Corporation, Irvine, CA) so that the angle of the filter face with respect to the collimated source beam may be varied, thus varying the wavelengths of light that are passed by the filter. Rotation of the filter over tilt angles of about 35° form normal incidence, results in variation of the wavelengths passed by the filter by ~70 nm toward shorter wavelengths.

Please replace the paragraph beginning on line 30, page 32 with the following amended paragraph:

The SPR optical assembly **560** comprises a prism, thin gold film and a flow reactor. The entrance and exit surfaces **565** and **570** of the prism were custom-ground (Matthew's Optical, Poulsbo, WA) to be perpendicular to the source beam for an incident angle of 64.8° at the metal surface. Light reflected form the SPR optical assembly passes through an imaging lens **575** (Edmund Industrial Optics, Barrington, NJ) to form a focused image (magnification<1) at the CCD detector **580** (Retiga EX, QImaging, Burnaby, Canada). The area of sample interrogation is circular and ~16 mm in diameter. Data acquisition is performed with software written in-house using Labview 6.1 (National Instruments, Austin, TX).